



NSF EAPSI Program Overview

Informational Webinar

September 9, 2016

Anne Emig
EAPSI Program Director
aemig@nsf.gov



Outline

- Global Scientific Context
- EAPSI Objectives and History
 - Partnerships
- Award Benefits and Special Conditions
- Nuts and Bolts of the EAPSI Competition
- EAPSI Merit Review
- Tips for Success
- Approximate Timeline
- A Few Specific Topics

US science and technology leadership increasingly challenged by advances in Asia

China is now decisively the second-largest performer of research and development

NATIONAL SCIENCE BOARD



Science &
Engineering
Indicators

2016
DIGEST



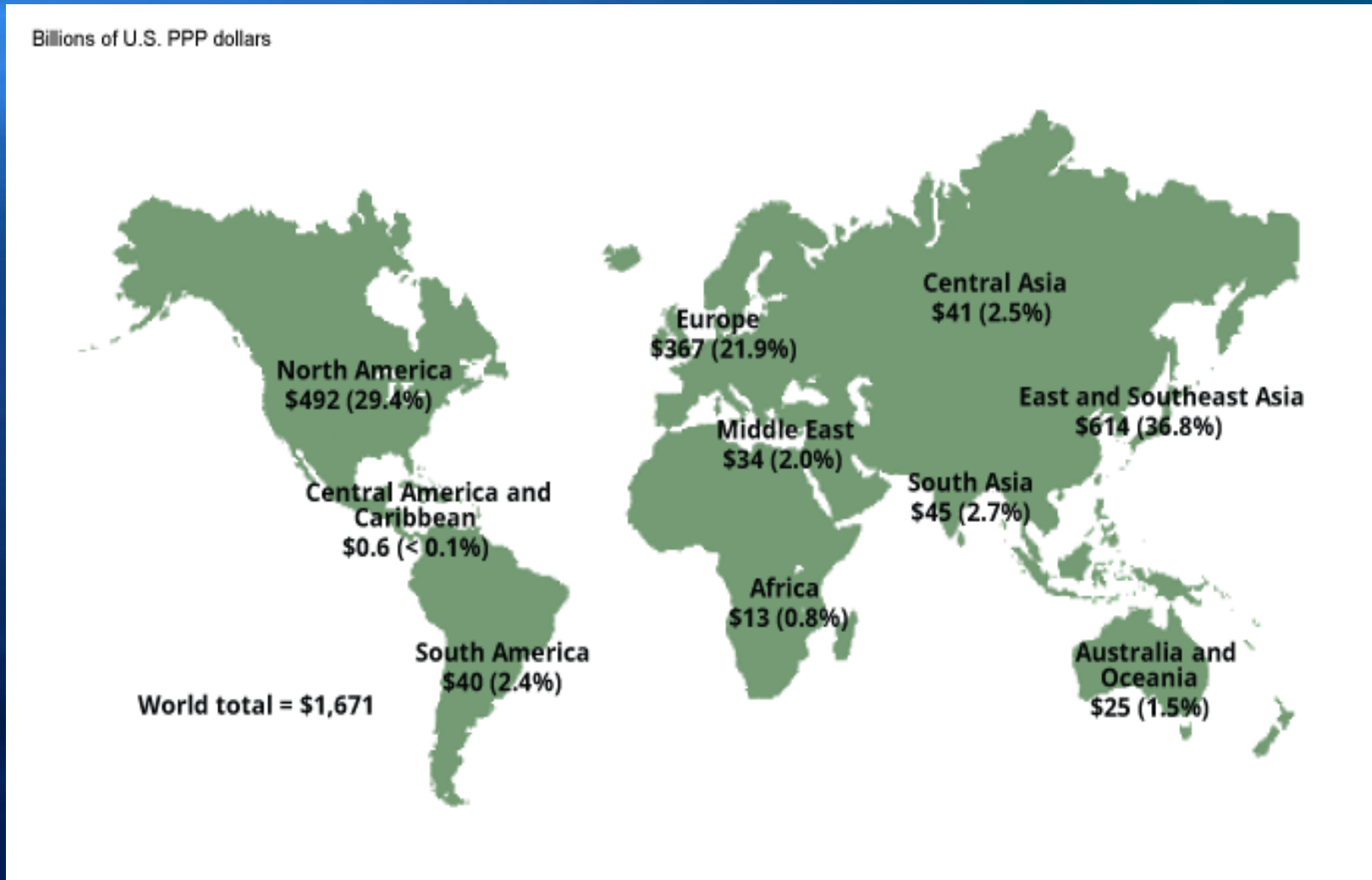
Research gets increasingly international

Big US report documents increases in international collaboration and Chinese science output.

[Nature News, Alexandra Witze](#) 19 January 2016

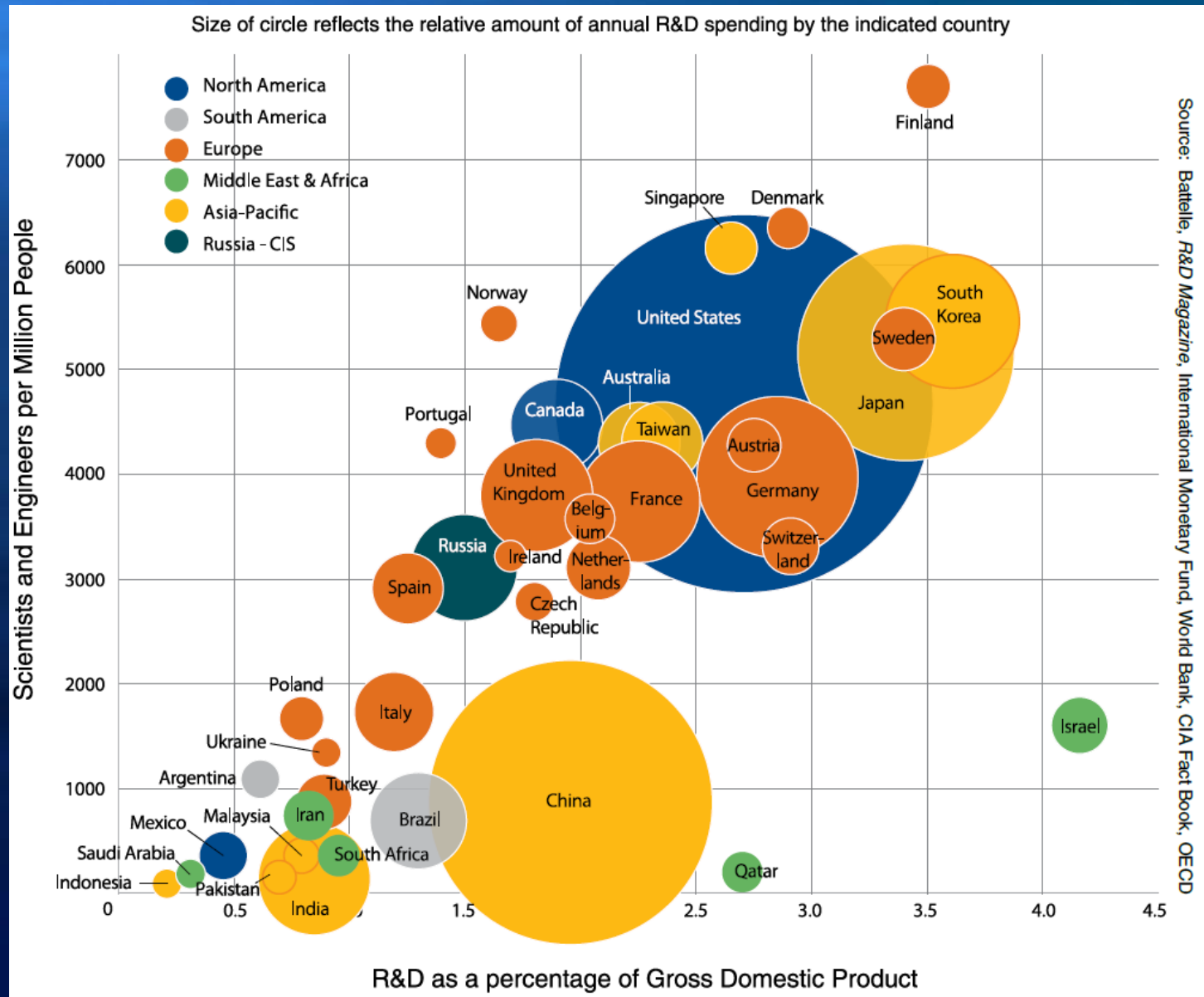
China's share of global science and engineering publications has pulled within a percentage point of those from the United States, according to the latest research statistics published by the US National Science Foundation (NSF). The agency's [report](#), released on 19 January, also underscores the rising importance of international scientific collaboration. Between 2000 and 2013, the percentage of publications with authors from multiple countries rose from 13.2% to 19.2%.

Global R&D Expenditures 2013



Source: Science & Engineering Indicators 2016, Figure 4-7.

Dynamic Global Landscape for S&T 2014



NSF Response?

- Leverage US and international investments
 - Expertise
 - Facilities
 - Field Sites/Phenomena
 - Data
- Facilitate international collaboration in research
- International research opportunities as critical element of S&E workforce development

EAPSI enables US graduate students to

- Advance their research
- Develop international collaborations
- Gain professional experience beyond the nation's borders early in their careers
- Spend 8-10 weeks in Australia, China, Japan, Korea, New Zealand, Singapore or Taiwan participating in the local culture and S&T enterprise

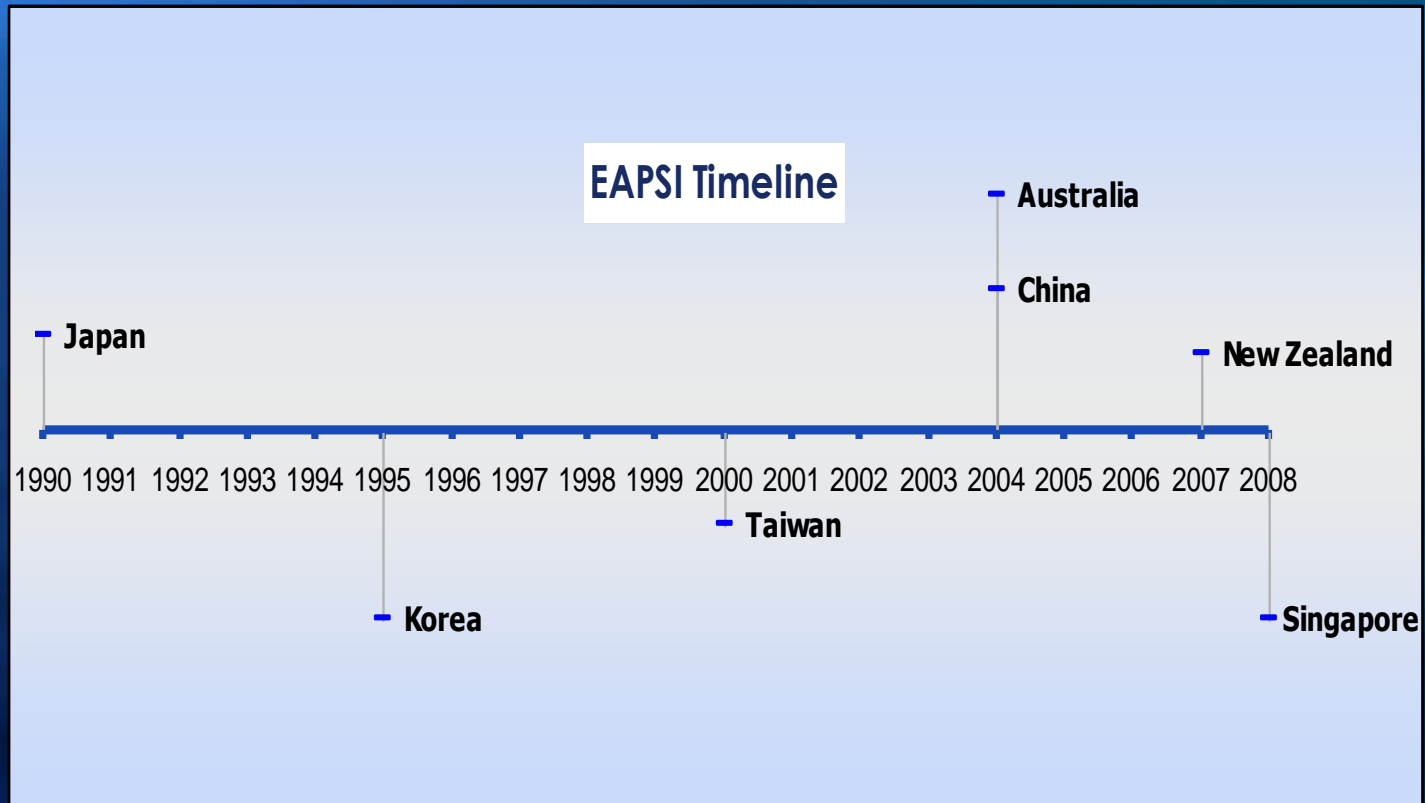


Foreign Partners

- Australian Academy of Science
- Chinese Ministry of Science and Technology
- Chinese Academy of Sciences
- National Natural Science Foundation of China
- Japan Society for the Promotion of Science
- National Research Foundation of Korea
- Royal Society of New Zealand
- National Research Foundation of Singapore
- Ministry of Science and Technology (Taiwan)



EAPSI Historical Timeline



Award Benefits

- 8-10 week research program
- NSF Contributions
 - Pre-Departure Orientation
 - \$5,000 summer stipend
 - \$400 incidental travel allowance
 - Roundtrip airfare to host location
- Counterpart Contribution
 - In-country opening activities
 - Closing activities in some locations
 - In-country living allowance (housing, meals)
 - Access – to researchers, field sites, data, etc.



What Does This Mean for You?

- Great benefits, some rules
- EAPSI fellows as NSF grantees
 - Scarce U.S. taxpayer resources invested in you
 - Take research component of program seriously
 - You represent NSF, your US science community
 - Respectful, collaborative approach appreciated
 - Certain USG grant rules apply, e.g.
 - Abstract and reporting requirements
 - Travel guided by federal policies
 - *Fly America Act*
 - NOTE: Doesn't apply to Japan cohort
 - Japan cohort gets tickets from JSPS



Great Benefits, Some Rules (cont'd)

- Counterpart invests scarce taxpayer resources in you as well
- Certain rules apply, by agreement of NSF and counterpart
 - Cohort program: fixed start, end dates
 - Must be in country for the duration of EAPSI
 - EAPSI is for you as an individual, unaccompanied
 - Spouses, dependents not supported, may not participate in EAPSI activities



The Nuts and Bolts

ELIGIBILITY

- U.S. citizen or permanent resident
- Enrolled in a research-oriented graduate degree program in the U.S.
 - Joint degree programs OK
 - Joint Bachelor's/Master's program OK if undergrad portion completed
- Conducting research in NSF-supported field of science, engineering, math, education
- Applicant must identify and contact host researcher prior to application deadline

Research Fields Supported by NSF

- Biological Sciences (BIO)
- Computer & Information Science & Engineering (CISE)
- Engineering (ENG)
- Geosciences (GEO)
- Math & Physical Sciences (MPS)
- Social, Behavioral & Economic Sciences (SBE)
- STEM Education Research (EHR)
- Multidisciplinary research in above areas

Fields NOT Supported by NSF

- Medical/Clinical, Dental, Veterinary, Pharmaceutical Sciences
- Public Health
- Fine Arts and Humanities
- Law
- Business
- Library Science

Fields Not Supported by NSF (2)

NSF does not normally support technical assistance, pilot plant efforts, research requiring security classification, the development of products for commercial marketing, or market research for a particular project or invention.

Research with disease-related goals, including work on the etiology, diagnosis or treatment of physical or mental disease, abnormality, or malfunction in human beings or animals, is normally not supported. Animal models of such conditions or the development or testing of drugs or other procedures for their treatment also are not eligible for support.

However, research in bioengineering, with diagnosis- or treatment-related goals, that applies engineering principles to problems in biology and medicine while advancing engineering knowledge is eligible for support. Bioengineering research to aid persons with disabilities also is eligible.

For additional details, see Grant Proposal Guide (GPG), Chapter I, NSF Programs and Funding Opportunities

(http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg):

EAPSI 2017

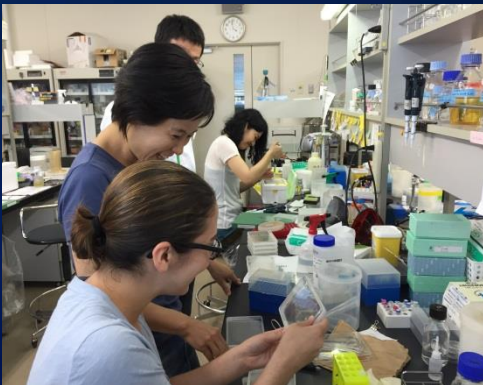
Program announcement: NSF 13-593

DEADLINE: Nov 10, 2016

5:00 pm local time

(No exceptions, no grace period)

Read the program announcement
and country handbook!



2016 Fellowships by Host Location

- Australia 26
- China 39
- Japan 65
- Korea 22
- New Zealand 15
- Singapore 15
- Taiwan 17



2016 Fellowships by Academic Discipline

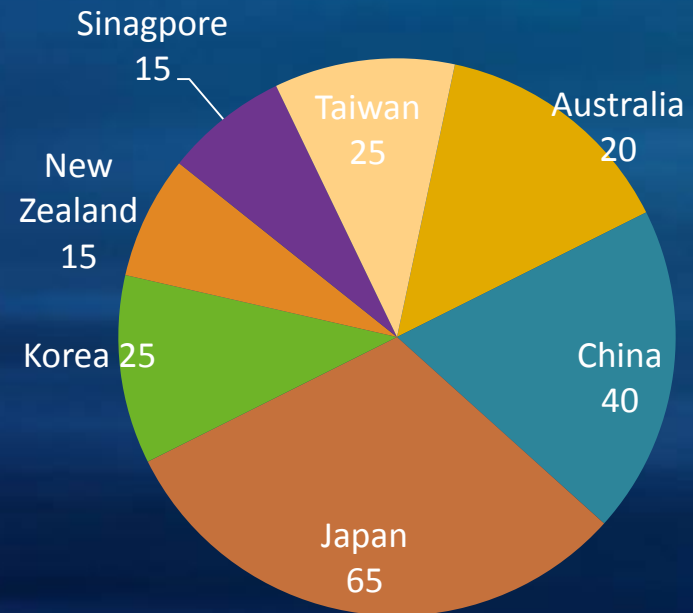
- Biological Sciences 27%
- Engineering & Computer Science 25%
- Geosciences 15%
- Math & Physical Sciences 24%
- Social, Behavioral & Economic Sciences 10%
- Education 1%



Anticipated 2017 EAPSI Fellowships by Location

(based on positions provided by host)

- Australia ~20
- China 40
- Japan 65
- Korea 25
- New Zealand 15
- Singapore 15
- Taiwan 25



Total Awards: 205

Success Rates

- A function of proposal pressure in relation to available positions
 - Considerable variation by year, location
- EAPSI average usually 40-50%
- By location: Historically, English speaking host locations have had the lowest success rate (highest rate of competition)
 - Australia, New Zealand
- By discipline: little variation

How Do I Find a Host?

- Consult your academic advisor
- Consult others in your lab, department
- Read the literature in your field
 - Authors of articles with intriguing or complementary results, methodologies, etc.
- Consult EAPSI alumni (NSF awards database <http://www.nsf.gov/awardsearch/>)
- Search websites of universities, research institutes in EAP



Approaching a Potential Host

- If available, a third party introduction is great...
...but not essential
- Email the potential host:
 - Give your name, advisor/lab, institution
 - Explain that you will be applying for a U.S. National Science Foundation fellowship program, cosponsored by [Name of NSF Counterpart for that Location, see slide 4], to conduct research in Location X in Summer 2016
 - Explain your research briefly
 - Explain how you found the researcher and what your interests are
- You may need to try a couple of times (host's email server thinks your mail is spam, host may be on travel, etc.)



Proposal Review



Overview of Merit Review Process

- EAPSI proposals are reviewed by the same criteria as any other NSF proposal
 - Intellectual Merit
 - Broader Impact
- EAPSI-specific criteria as listed in solicitation
- In principle, panel review
 - Ad hoc review as appropriate



NSF Intellectual Merit Review Criterion

- ❖ How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields?
- ❖ How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.)
- ❖ To what extent does the proposed activity suggest and explore creative and original concepts?
- ❖ How well conceived and organized is the proposed activity?
- ❖ Is there sufficient access to resources?



Intellectual Merit

- Must be addressed in project summary *and* project description
- Some key elements of IM criterion
 - Research question/hypothesis and its significance
 - Methodology
 - Timeline
 - Your qualifications
 - Synergy with proposed work with expertise of your host
 - Why this host in this location?
 - Why do you need to go there to do the work?



NSF Broader Impacts Review Criterion

- ❖ How well does the activity advance discovery and understanding while promoting teaching, training, and learning?
- ❖ How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)?
- ❖ To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships?
- ❖ Will the results be disseminated broadly to enhance scientific and technological understanding?
- ❖ What may be the benefits of the proposed activity to society?



Broader Impacts

- Must be addressed in the project summary *and* the project description
- Some considerations of BI criterion
 - What will be the impact on you, your research?
 - How will your research impact the world beyond your lab (discipline, society, etc.)?
 - *What do you as PI on this federal grant plan to do to extend the impact of the investment beyond yourself and your lab?*



EAPSI-Specific Review Criteria

- ❖ Qualification of applicant, including potential for continued growth and the probable effect of participation in the Summer Institute on the applicant's career
- ❖ Resources and capabilities of the proposed host institution(s) and researcher(s), and/or the current stature of research in the student's field of interest in the chosen location
- ❖ Merit, complementarities, and expected mutual benefits of the proposed international collaboration



Post-Panel Process

- Panel recommendations are *advisory* to NSF
- Program officer recommendation based on reviewer advice, program priorities
 - Tentative notification to PIs NSF plans to recommend to our foreign counterparts (late Feb)
- NSF recommendation to foreign counterparts
- Foreign counterpart acceptance
 - Both NSF and foreign counterpart must agree for award to proceed
- NSF award recommendation
- Award/decline notification to PI from NSF Division of Grants and Agreements (~May)



Tips for Success

- ❖ Read program announcement
- ❖ Strong, well-explained research proposal
- ❖ Realistic timeline
- ❖ Thoughtful broader impacts
- ❖ Clear contribution by you as PI
 - ❖ If joining an existing collaboration, clearly articulate what your contribution will be.
- ❖ Clearly articulated rationale for choosing host



Approximate Program Cycle

- ❖ Now: Plan research, communicate with host researcher
- ❖ November 10, 2016: Application deadline
- ❖ December-January: NSF review panels, post-panel analysis
- ❖ End-February: Tentative offers to students, nomination to counterpart organizations
- ❖ Early April (approximate): Pre-Departure Orientation (virtual), notification of acceptance from counterpart organizations
- ❖ Late May: NSF awards issued
- ❖ June: travel to East Asia, award funds disbursed
- ❖ June to August: Summer institutes
- ❖ March 2017: Final Report and Project Outcomes Report due



A Few Topics of Specific Interest



For EAPSI Alumni

- Alumni may apply to EAPSI again BUT several caveats
 - Must apply to a different location (country)
 - Must address *Results of Prior NSF Support* within your 5-page project description
 - Priority will go to those without prior EAPSI experience
 - Little chance of success in English-speaking countries, which typically have the highest proposal pressure
 - Overall chance of success contingent on proposal pressure



2nd or 3rd Choice Location

- Optional
- No host researcher information required...
- *...however*, it is difficult for reviewers to assess the feasibility of a 2nd, 3rd choice location without host information
- NSF strongly discourages choice of English-speaking countries, especially Australia and New Zealand, countries as alternate locations



A Few More Nuances

- Japan does not accept assistant professors as official hosts.
 - If your ideal mentor is an assistant professor, you should identify a more senior co-mentor
- Our China counterpart funds a narrower range of social science research than NSF.
 - Contact NSF EAPSI team if you have questions.
- Your research may require permits in host location. Consult your host.



Human Subjects Research

- NSF Policy: Grant Proposal Guide (GPG) II.D.8
 - US IRB approval or exemption required
 - Include your name, proposal ID, explanation of work that will be done internationally
 - Host location must be included in HHS/OHRP *International Compilation on Human Research Standards* (true of all locations)
 - NSF does not require documentation from host
- Host institution may have *its own* human subjects protection requirements as well. You must follow these.
 - Consult host researcher if in doubt.

Vertebrate Animals

- NSF Policy: Grant Proposal Guide (GPG)

II.D.7

- IACUC approval from US institution, including
 - Your name and project title
 - Description of the international aspects of the work
- Letter from the host institution/lab stating that
 - Research will be conducted in accordance with all applicable laws in the country AND
 - *International Guiding Principles on Biomedical Research Involving Animals* will be followed
- **BOTH requirements must be met for award to go forward.**

IRB/IACUC Timing?

- IT DEPENDS...
 - Not required at the proposal stage
 - Essential for an award to be made
- Many students begin to work on IRB, IACUC approvals after tentative award notification from NSF (Feb-Mar), but...
 - Some IRBs/IACUCs work slowly
 - Some add requirements beyond NSF's
 - Best to check well in advance



Questions?

Program Solicitation, Online Application and Deadlines:
<http://www.nsf.gov/eapsi>

Questions: Email eapsi@nsf.gov

We recommend email over phone for first contact: it enables us to respond at off hours, involve others in the discussion, and track progress in addressing with your concern.

A follow-up phone call can be arranged as needed.

EAPSI Team

Anne Emig, EAPSI Program Director
Elena Hillenburg, EAPSI Program Specialist
Joe Miller, Program Director

